

IN THE UNITED STATES PATENT OFFICE
BEFORE THE BOARD OF APPEALS

EX PARTE BUSHBY

Application for Patent

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Serial Number 10/817,172

For

SYSTEM FOR TREATMENT OF PLANTAR FASCIITIS

Technology Center 3700

REPLY BRIEF

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I. STATUS OF THE CLAIMS

Claims 1 – 43 have been canceled.

Claims 44 – 80 have been rejected numerous times. This appeal is being made on the non-final rejection mailed out August 4, 2009. It is noted that the Examiner had indicated allowable subject matter during an interview dated May 8, 2008, however, subsequently continued to reject the claims.

The rejection of Claims 44 – 80 is currently being appealed.

A Request for Pre-Brief Appeal Conference was filed on September 16, 2009. A decision on the Pre-Brief Appeal Conference was mailed out on November 23, 2009 indicating that the Appeal should go forward.

II. GROUNDS OF THE REJECTIONS TO BE REVIEWED ON APPEAL

1. Whether Claims 44, 55, 62, 66 and 70-71 are unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden.

2. Whether Claims 48 – 54 and 56-60, 62-66 are unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Domenico.

3. Whether Claims 45, 72, 75-76, 78 and 80 are unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Desnoyers.

4. Whether Claim 46 is unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Desnoyers.

5. Whether Claims 47, 61, 67 and 69 are unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Huddleston et al.

6. Whether Claim 68 is unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Huddleston et al.

7. Whether Claim 73 – 74 are unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Desnoyers.

8. Whether Claims 77 and 79 are unpatentable under 35 U.S.C. §103(a) as being obvious over Burgess in view of Holden and in further view of Desnoyers and in further view of Huddleston et al.

III. ARGUMENT

In the Response to Arguments section on page 15 of the Examiner's Answer, the Examiner argues that

"Burgess provides the recited structure required by the rest of claim of limitations and would be capable of meeting the functional recitation. Further, the claim does not recite any distinct structural elements that would preclude the foot protector of Burgess to meet the claim limitations or to define an orthotic as claimed in the preamble. The recitation orthotic has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause."

As set forth in the Appeal Brief at page 15, "'When the limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.'" *Eaton Corp. v. Rockwell Int'l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003)." As set forth in footnote 10, an orthotic is commonly defined as a device that is used to support, align, prevent or correct the function of movable parts of the body. The Examiner has failed to refute this definition. Claim 44 includes the recitation of the component limitation of an orthotic in the preamble upon which the limitations in the body of the claim of the stretch-resistant sole member, and the adhesive layer of sufficient adhesion to maintain the stretch-resistant sole member in adhesive engagement with an outer skin tissue on the sole of the foot, such that tension forces applied to a plantar fascia are shared with an outer skin tissue, the adhesive layer, and the sole member to restrict extension and stretching of an outer skin tissue of a sole of a wearer's foot, whereby preventing excessive tensile stress in a plantar fascia. These limitations act as a necessary component of an orthotic device as the components of a stretch-resistant sole member and an adhesive having the described properties serve to support, align, prevent or correct the function of movable parts of the body, i.e., restrict the tensile forces on the plantar fascia.

The device of Burgess is directed to a disposable foot protector which acts as a house slipper on the sole of the foot, not as an orthotic device, and certainly not to restrict the tensile forces on the plantar fascia. The Examiner refers to the device of Burgess as an orthotic device

but fails to describe how the device of Burgess serves to support, align, prevent or correct the function of movable parts of the body.

The Examiner further argues that

"when the Burgess device is adhere to the sole of the foot, therefore it will obviously restrict the extension of the skin as it is adhesively applied. As a result, when the Burgess device is adhesively applied to the plantar fascia portion of the user's foot which would eventually is able to reduce tension in the plantar fascia, since the tension forces are caused by the forces on an arch of the foot which push the bones of the foot downwardly. Further, when the device of Burgess is adhesively secured to the sole of the user's foot which will be capable of preventing extension and stretching of muscle in plantar fascia portion of the user's sole of the foot, which would eventually results in treating pain in at least one of the heel, or arch or ball of the foot and, would eventually reduce tension on the plantar fascia of the foot. The liner of Burgess when applied to the sole of the foot is applied with an adhesive and will be capable of preventing stretch of the tissue to the sole of foot, therefore, the Examiner interprets that the Burgess's liner discloses an equivalent "stretch resistant" property as claimed "stretch resistant" property, since as claimed the support of the claimed invention does not require any distinguish structure to be stretch less, therefore the device of Burgess meets this claimed limitation."

The Examiner is arguing that since the disposable foot protector of Burgess uses an adhesive, it must then become stretch resistant and reduce tension on the plantar fascia. This is despite the clear disclosure in Burgess that the disposable foot protector be flexible, resilient, used with a light tack adhesive so not to cause discomfort, and *foot protector 100 is able to adjust to flexing of the foot during normal walking or running movements without inhibiting foot movement* or causing the tack adhesive to tear away from the foot." There can not be any possible manner in which the disposable foot protector of Burgess can adjust to the flexing of the foot during movement without inhibiting foot movement or causing the tack adhesive to tear away from the foot unless the foot protector is able to stretch. It simply is not possible. If the disposable foot protector of Burgess does not stretch, and the adhesive does not tear away from the foot, then the foot is by necessity restricted from movement which violates the disclosure of Burgess. *That is why Burgess discloses using a stretchable material as the foot protector, so that the foot protector may stretch so not to restrict movement of the foot.* The presently claimed invention operates in direct opposition to the device of Burgess by using a *stretch-resistant*

material to *limit* the forces on the plantar fascia and which will also by its nature restrict movement of the foot.

The conclusions by the Examiner that the disposable foot protector of Burgess performs the functions of reducing the tension in the plantar fascia, preventing extension and stretching of muscle in plantar fascia, treating pain in at least one of the heel, or arch or ball of the foot, and preventing stretch of the tissue in the sole of the foot runs counter to the disclosure of Burgess and any common sense understanding of the disposable foot protector of Burgess.

In regard to the claimed limitation of an adhesive layer of sufficient adhesion to maintain the stretch-resistant sole member in adhesive engagement with an outer skin tissue on the sole of the foot, such that tension forces applied to a plantar fascia are shared with an outer skin tissue, the adhesive layer, and the sole member to restrict extensions and stretching of an outer skin tissue of a sole of a wearer's foot, whereby preventing excessive tensile stress in a plantar fascia, the Examiner argues that the applicant fails to disclose any specific type, amount, or degree of adhesive to have a therapeutic effect. The claims, as supported by the specification, require an adhesive having the specific limitation of having sufficient adhesion to force the tensile forces on the plantar fascia to be shared with the outer skin tissue, the adhesive layer and the stretch-resistant sole member to prevent excessive tensile forces on the plantar fascia. Burgess, on the other hand, clearly discloses an adhesive sufficient to only adhere to the skin without restricting the movement of the foot, Burgess clearly discloses that the adhesive not inhibit the movement of the foot, which would happen if the tensile forces on the plantar fascia are shared with the outer skin tissue, the adhesive layer and the stretch-resistant sole member to prevent excessive tensile forces on the plantar fascia. In order that excessive tensile forces do not occur on the plantar fascia, it is necessary to restrict the movement of the plantar fascia, and thus the foot, to move those forces onto the stretch-resistant sole member.

In regard to the claim limitation of a single woven fabric layer, as set forth in claim 55, the Examiner ignores the common definition of woven fabric and insists upon creating her own definition that if a fabric is made of natural fiber, then it must be woven. This is not supported by dictionary definitions of woven fabric. Woven fabric is a specific term of art requiring that the fibers of a fabric be interlaced at right angles to one another. Woven fabrics only stretch in the bias directions (between the warp and weft directions) unless the threads are elastic. Burgess

on the other hand requires that the fibers be randomly oriented in order to provide resilience and flexibility, the opposite of the claimed limitation. Further, nowhere does Burgess disclose the use of a woven fabric layer. The Examiner makes the assumption that since Burgess discloses the use of natural fibers, that natural fibers must be woven. This is incorrect, as fibers are commonly knit together to form elastic loop fabrics that are more elastic than woven fabrics. Further, natural fibers may also be fused together in nonwoven techniques, such as felt which would be more typical of the resilient and flexible material used by Burgess as disclosed by Burgess in order to act as a comfortable house slipper.

In regard to the Examiner's assertion that it would be obvious "to use lesser pound weight to tensile strength of Desnoyer's article to provide a lesser ratio of elongation of Desnoyer's article to provide a lesser ratio of elongation to the device of Burgess and Holden" to meet Applicant's claimed limitation of an orthotic device having a ratio of elongation to tensile strength of about less than 0.9, this simply does not make sense. Desnoyer does not disclose any ratio of elongation to tensile strength and certainly not one that is less than .9. Desnoyer actually discloses a highly stretchable adhesive tape that stretches at least 45% in the lengthwise direction before breaking. The only ratios discussed in Desnoyer is that the crosswise tensile strength is three times that of the lengthwise strength, and a ratio of elongation in the lengthwise direction compared to elongation in the crosswise direction of ten to one, neither of which has anything to do with the claimed limitation. Further the discussion of lesser pound weight is confusing as to the relevance of lessening the pound weight of Desnoyer to provide "a lesser ratio of elongation". There simply is no reasonable rationale brought forth as to why one skilled in the art would use the teachings of highly stretchable adhesive tape to modify a stretchable foot protector to arrive at the claimed limitation of a stretch-resistant orthotic device having a ratio of elongation to tensile strength less than .9. This rejection is not understood as to its relevance to the claimed limitation. *Nowhere does Desnoyer discuss the ratio of elongation to tensile strength.*

In regard to the Examiner's assertion that Huddleston et al. provides adequate teaching to modify the device of Burgess and Holden "to have strong adhesion having tensile load approximately equivalent to 25 pounds/inch", this fails to meet the claimed limitation of a sole member exhibiting less than 15% elongation when subject to a tensile load equivalent of 25

pounds. The aluminum metal tape of Huddleston does not disclose any elongation when subjected to load of any level. It is agreed that Huddleston does disclose an aluminum metal tape adhesive having a tensile strength of 25 pounds. However, Huddleston et al does not disclose, nor is it concerned with the percentage of elongation that aluminum metal tape exhibits when placed under a 25 pound load in accordance with ASTM D3759. There simply is no reasonable rationale as why it would be obvious to one skilled in the art to modify the disposable foot protector of Burgess with the aluminum metal tape of Huddleston et al. to provide the claimed limitation of a stretch-resistant sole member exhibiting less than 15% elongation when subjected to a tensile load of 25 pounds, particularly when neither reference is concerned with stretch resistance, and neither reference disclose the claimed limitation.

IV. Conclusion

For at least the reasons set forth above and in the Appeal Brief, it is respectfully submitted that the rejection of claims 44 - 80 is clearly improper. The Appellant therefore respectfully requests that the Board of Patent Appeals and Interferences reverse the Examiner's decision rejecting these claims and to direct the Examiner pass the case to issue.

Respectfully submitted,

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